

IN THE CLAIMS:

1. (Cancel)

2. (Currently Amended) A method of controlling hand over in a mobile communication system comprising a mobile station, a plurality of base stations each communicating with the mobile station, and a base station controller controlling a the plurality of base stations, ~~in which a received level of a perch channel signal received at a mobile station for deciding a range of a cell (or sector) is compared with a reference value, to judge timing of starting or ending hand over,~~ said method comprising: ~~the steps of:~~

each of the plurality of base stations transmitting a perch channel signal which decides a range of a cell (sector) to be covered by one base station to the mobile station;

the mobile station measuring a received level of the perch channel signal when the signal is received from the plurality of base stations, and based on a result of the measurement, transmitting information on a hand over source cell (source sector), a hand over destination candidate cell (candidate sector) and on the received level of the perch channel signal associated with these cells (sectors) to each of the base stations;

each of the base stations transmitting the information to the base station controller when the information is received from the mobile station; and

when the base station controller receives the information from the mobile station through the plurality of base stations, the controller performing the steps of:

~~preparing reading a correction value in advance for each combination of a stored in a storage unit based on information on the hand over source cell (or source sector) and a the hand over destination candidate cell (or destination candidate sector) of hand over contained in the information, the correction value being used to correct a reference value of the received signal level necessary for controlling the hand over;~~

~~recognizing a combination of a source cell (or source sector) and a destination cell (or destination sector) as objects of hand over to be started or ended;~~

~~correcting said the reference value using a with the correction value prepared in advance for said combination recognized; and~~

~~judging timing of starting or ending of said controlling the hand over using said based on the corrected reference value corrected and the received signal level of the perch channel signal contained in the information from the mobile station.~~

3. and 4. (Cancel)

5. (Currently Amended) ~~A method~~ The method of controlling hand over according to Claim 2, wherein ~~in a mobile communication system, in which a received level of a perch channel signal received at a mobile station for deciding a range of a cell (or sector) is compared with a reference value, to judge timing of starting or ending hand over, comprising the steps of:~~

~~accumulating at least one result (success or failure) of judging said timing using said reference value for each combination of a source cell (or source sector) and a destination cell (or destination sector) of hand over;~~

~~correcting said reference value depending on said accumulated result; and
setting said corrected reference value as a new reference value that is used in
judging timing of starting or ending hand over with respect to said combination again.
the base station controller updates the correction value stored in the storage unit
based on the result of hand over performed.~~

6. (Currently Amended) A method of controlling hand over according to claim
5, wherein the base station controller controls transmission power of the perch
channel signal depending on the hand over performed. ~~in a mobile communication~~
~~system, in which a received level of a perch channel signal received at a mobile~~
~~station for deciding a range of a cell (or sector) is compared with a reference value,~~
~~to judge timing of starting or ending hand over, comprising the steps of:~~
~~accumulating at least one result (success or failure) of judging said~~
~~timing using said reference value for each combination of a source cell (or source~~
~~sector) and a destination cell (or destination sector) of hand over; and~~
~~adjusting a transmitting level of a perch channel of a base station~~
~~covering a source cell (or source sector) or a destination cell (or destination sector)~~
~~of a combination concerned, depending on the accumulated result.~~

7. (Currently Amended) A base station controller that judges timing of starting
or ending hand over by comparing a received level of a perch channel signal with a
reference value, with said perch channel signal being received at a mobile station
and used for deciding a range of a cell (or sector), comprising: in a mobile
communications system comprising a mobile station, a plurality of base stations

which each communicate with the mobile station, and the base station controller
controlling the plurality of base stations,

the base station controller comprising:

~~a storage unit that stores a correction value used for each combination
of a source cell (or source sector) and a destination cell (or destination sector) of
hand over;~~ correcting a reference value of a received signal level necessary for
controlling hand over;

~~an acquiring unit for acquiring information from a mobile station, said
information indicating a combination of a source cell (or source sector) and a
destination cell (or destination sector) of hand over to be started or ended with
respect to said mobile station;~~

~~a correcting unit that corrects said reference value using a correction
value that is stored in said storage unit correspondingly to the combination of the
source cell (or source sector) and the destination cell (or sector), with said
combination being recognized from the information acquired by said acquiring unit;
and~~

~~a timing judgement unit that uses the reference value corrected by said
correcting unit, to judge timing of starting or ending the hand over to be started or
ended with respect to said mobile station.~~

an interface unit which receives information outputted from the mobile
station through the plurality of base stations, the information being necessary for
controlling hand over; and

a control unit which reads the correction value stored in the storage
unit based on information on the hand over source cell (source sector) and on the

hand over destination candidate cell (candidate sector) contained in the information received by the interface unit, corrects the reference value with the correction value; and controls the hand over based on the corrected reference value and the received signal level of the perch channel signal contained in the information from the mobile station.

8. (Currently Amended) A base station controller ~~that judges timing of starting or ending hand over by comparing a received level of a perch channel signal with a reference value, with said perch channel signal being received at a mobile station and used for deciding a range of a cell (or sector), comprising:~~ according to Claim 7, wherein:

~~an acquiring unit for acquiring information from a mobile station, said information indicating a combination of a source cell (or source sector) and a destination cell (or destination sector) of hand over to be started or ended with respect to said mobile station;~~

~~a timing judgement unit that uses said reference value to judge timing of starting or ending the hand over with respect to said mobile station; and~~

~~a correcting unit that accumulates at least one result (success or failure) of trying starting or ending the hand over according to the timing judged by said timing judgement unit for the combination of the source cell (or source sector) and the destination cell (or destination sector) indicated by the information acquired by said acquiring unit, corrects said reference value depending on said accumulated result, and sets said corrected reference value as a new reference value that is used~~

~~by said timing judgement unit for judging timing of starting or ending the hand over with respect to said combination again.~~

the control unit updates the correction value stored in the storage unit based on hand over performed.

9. (Currently Amended) A base station controller that ~~judges timing of starting or ending hand over by comparing a received level of a perch channel signal with a reference value, with said perch channel signal being received at a mobile station and used for deciding a range of a cell (or sector), comprising:~~ according to Claim 8, wherein:

the control unit controls transmitting power of the perch channel signal depending on the result of hand over performed.

~~an acquiring unit for acquiring information from a mobile station, said information indicating a combination of a source cell (or source sector) and a destination cell (or destination sector) of hand over to be started or ended with respect to said mobile station;~~

~~a timing judgement unit that uses said reference value to judge timing of starting or ending the hand over with respect to said mobile station; and~~

~~an adjusting unit that accumulates at least one result (success or failure) of trying starting or ending the hand over according to the timing judged by said timing judgement unit for the combination of the source cell (or source sector) and the destination cell (or destination sector) indicated by the information acquired by said acquiring unit, and adjust a transmitting level of a perch channel signal of a~~

~~base station that covers the source cell (or source sector) or the destination cell (or destination sector) of said combination, depending on said accumulated result.~~

10. (Currently Amended) A mobile terminal that judges timing of starting or ending hand over by comparing a received level of a perch channel signal with a reference value, with said perch channel signal being used for deciding a range of a cell (or sector), comprising: station in a mobile communication system which comprises the mobile station, a plurality of base stations which each communicate with the mobile station, and a base station controller controlling the plurality of base stations,

the mobile station comprising:

a storage unit that stores a correction value for each combination of a source cell (or source sector) and a destination cell (or destination sector) of hand over; used for correcting a reference value of a received signal level necessary for controlling hand over; and

a recognizing unit that recognizes a source cell (or source sector) and a destination cell (or destination sector) of hand over to be started or ended, based on received levels of perch channel signals;

a correcting unit that corrects said reference value using a correction value that is stored in said storage unit correspondingly to a combination of the source cell (or source sector) and the destination cell (or destination sector) recognized by said recognizing unit; and

~~a timing judgement unit that uses the reference value corrected by said
correcting unit, to judge timing of starting or ending said hand over to be started or
ended.~~

a control unit which measures a received level of a perch channel signal when
the signal is received from the plurality of base stations, selects a candidate cell
(candidate sector) for hand over based on the measured result, reads the correction
value stored in the storage unit based on information on the hand over source cell
(source sector) and on the hand over destination candidate cell (candidate sector) to
correct the reference value with the correction value, and controls hand over based
on the corrected reference value and the received signal level of the perch channel
signal of the hand over source cell (source sector) and hand over destination cell
(candidate sector).

11. (Currently Amended) The mobile ~~terminal~~ station according to Claim 10,
further comprising: wherein

~~a notifying the control unit that notifies a result (success or failure) of trying
starting or ending the hand over according to the timing judged by said timing
judgement unit, to a the base station with which said mobile terminal is
communicating.~~ stations under communication of the result of the hand over
performed.

12. (New) The method of controlling hand over according to Claim 2, wherein
the correction value is a tabulated correction value stored in a correction value table

having a plurality of correction values arranged according to hand over source cells (source sectors) and hand over destination candidate cells (candidate sectors).

13. (New) The base station controller according to Claim 7, wherein the correction value is a tabulated correction value stored in a correction value table having a plurality of correction values arranged according to hand over source cells (source sectors) and hand over destination candidate cells (candidate sectors).

14. (New) The mobile station according to Claim 10, wherein the correction value is a tabulated correction value stored in a correction value table having a plurality of correction values arranged according to hand over source cells (source sectors) and hand over destination candidate cells (candidate sectors).

PENDING CLAIMS/CORRECTION TO CLAIM 9

In the Amendment filed 27 September 2004, appropriate claims were amended, added and/or canceled (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. At entry of the 27 September Amendment, Claims 2 and 5-14 were pending for further consideration and examination in the present application.

In the claim listing submitted in the 27 September Amendment, the status indicator for Claim 9 was inadvertently omitted. An identical listing of claims and amendments as filed in the 27 September Amendment, with the corrected status indicator given for Claim 9, is submitted herein to replace the claims/amendments in the 27 September Amendment. No other changes are made.

This Response to Notice of Non-Compliant Amendment (37 CFR §1.121) is being submitted within the time set by the Notice for response. Accordingly, no Petition or extension fee is necessary.

Respectfully submitted,



Paul J. Skwierawski
Registration No. 32,173
ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209-3873, USA
Telephone 703-312-6636
Facsimile 703-312-6666